



Version 1.5 User Manual



TRACER+ Version 1.5

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Chapter 1 Introduction

1.1 What is Tracer+?

Tracer+ offers individual Palm OS users, small businesses, and large enterprises the ability to create powerful data collection applications in minutes. Many common tasks such as asset management, inventory control, and many others become fast and easy with Tracer+. No programming knowledge is needed – just create your familiar forms, such as inventory audit sheets and material receipts, right on your PDA.

Designed by Symbol certified programmers, Tracer+ incorporates time saving features that are not seen in other applications. Powerful features such as "Data Entry Validation", "On Scan Data Lookups", and "After Scan Settings" save you time and money. If you or your company has to collect data, Tracer+ pays for itself in days.

Tracer+ is shareware which means you can use Tracer+ on a trial basis for no fee. The trial download is limited in that it only allows 2 Sessions (Chapter 3) to be created and only 5 records will hotSync to the PC. Once you decide to purchase Tracer+, simply purchase a license at <http://www.ptshome.com>. PTS will send a registration code within 24 hours.

1.2 Learning Tracer+

To discover the full power of Tracer+, we strongly recommend that you read this manual completely. However, with only a basic understanding of **Chapters 3 and 4** a user can begin to create basic applications on the PDA. If you wish to send data to a PC or retrieve a database from a PC, **Chapter 5** should be read thoroughly. Finally if a system administrator needs to deploy Tracer+ sessions to a mobile workforce, **Section 3.3** should be read thoroughly. When you purchase Tracer+, you receive free e-mail support for 30 days.

We have also included a simple tutorial in this manual. It explains step by step how to set up a simple inventory audit program that can be used for your companies' inventory or your home assets. Refer to **Chapter 7** for more information.

1.3 Bar Coding with Tracer+

Even though Tracer+ does not give ordinary Palm Pilots the ability to scan bar codes, it is still an asset to any Palm OS PDA if you intend to collect and manage data. However, if you want to experience the full power of Tracer+, a bar code enabled PDA should be used. Below is a list of the current bar code enabled PDAs currently supported by Tracer+. All of these units are available for purchase at <http://www.ptshome.com>.

Current Palm OS bar code enabled PDAs include:

- SPT-1500/1550 Series by Symbol Technologies
- SPT-1700 Series by Symbol Technologies
- SPT-1800 Series by Symbol Technologies
- CSM 150 Bar Code Plug-in Module for Handspring Visor by Symbol Technologies
- Momentum II Bar Code Plug-in Module for Handspring Visor by PSC

1.4 PTS Support

As a registered Tracer+ user, you receive free email support for 30 days from the date of purchase. During this period, we are available to answer Tracer+ questions as well as general bar code questions. Our goal is to provide Tracer+ users the tools to capitalize on the efficiencies of bar code data acquisition. To contact PTS support, email support@ptshome.com. Please allow us 24 hours to respond although it is often much faster.

Extended support contracts, including phone support can also be purchased at <http://www.ptshome.com>.

Chapter 2 Installation

This chapter details the steps for installing Tracer+. For most installations, the automatic install is sufficient. In certain scenarios, the automatic installation may not work and a manual installation is necessary.

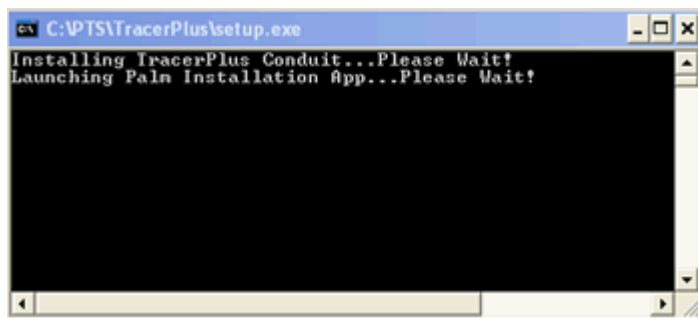
2.1 System Requirements

- **Windows 95/98/NT/2000/XP**
- **Palm Desktop v3.1 or higher**
- **Palm OS 3.0 or higher**

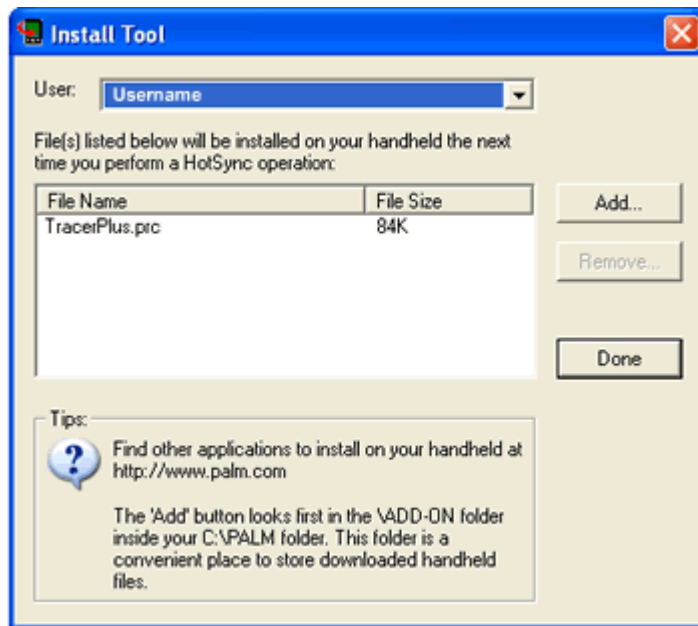
2.2 Automatic Installation

1. Download **tracerp.exe** from <http://www.ptshome.com> or another authorized reseller.
2. Double click **tracerp.exe** in the folder to which you saved the download.
3. Click the **Unzip** button. You will be prompted for a location to extract the information. The default location is **C:\PTS\TracerPlus**. For simplicity, the remainder of the instructions refers to **C:\PTS\TracerPlus** as the installed location. Remember to substitute the actual location when performing those steps yourself.
4. Upon successful file extraction, double-click on **setup.exe** located in **C:\PTS\TracerPlus**.
5. The setup application installs both the PDA Application as well as the PC conduit used for the data transfer. Follow the remaining steps and the software installation is complete.

The DOS screen below will appear on the PC during installation.



The **Install Tool** of Palm Desktop will next appear, choose the **User** you would like Tracer+ to be installed on and then select **Done**.



6. Perform a **HotSync** with your PDA. At this point, you should see the Tracer+ application installed on your Palm Pilot.
7. On the PDA, tap the Tracer+ icon → Tap **Try It** → Tap **New** → Test your Scanner to confirm the installation took place correctly.

2.3 Registering Tracer+

Tracer+ is an application that requires registration for full functionality. The trial version of Tracer+ limits the number of records entered on the PDA and transferred to the PC to five and the number of sessions to two. Of course, the full version does not contain this limitation

PTS encourages all users who benefit from Tracer+ to register their copy. To register Tracer+, we only require your Palm User ID and an Email address. We generate a unique serial number to your Palm User ID so it is important that you send the ID exactly as it appears on the Tracer+ splash screen.

This user ID can also be found in the HotSync application of your Palm Pilot in the upper right-hand corner of the screen.

How to Register Online:

1. Go to <http://www.ptshome.com> or authorized Tracer+ reseller.
2. Follow the link for Tracer+.
3. Click on the **Register** button.
4. You are now prompted for your **User ID**.
5. Once you submit your **User ID**, you will be sent to a PTS secure on-line purchase area.
6. Once credit card information is completed and verified, your Registration Code is e-mailed to the address provided. This process usually takes approximately one hour but we ask that you allow one business day in the event of heavy traffic or any other delay.

2.4 Entering your Registration code

1. Run the Tracer+ application on your PDA.
2. Press the **Register** button in the Tracer+ Splash Screen.
3. Enter your Registration Code at the **Code** prompt.
4. If the Registration Code is valid, you will receive a **Thank you for Purchasing Tracer+** message.

2.5 Un-installing Tracer+

In the unlikely event that you would like to remove Tracer+ from your PDA, follow these simple instructions.

Run **Uninstall.bat** from the folder where you saved the extracted Tracer+ file. This removes the conduit from the **HotSync** process but the Tracer+ application must be manually removed from the PDA.

Chapter 3 Sessions

Tracer+ allows users to create up to thirty-two unique data capture programs. These unique programs are called sessions. Sessions are easily accessed from the **Main Screen**, where captured data can be viewed and searched. In this section you will learn how to configure session attributes to meet your data capture needs. **Chapter 4** details how to configure individual fields within a Session.

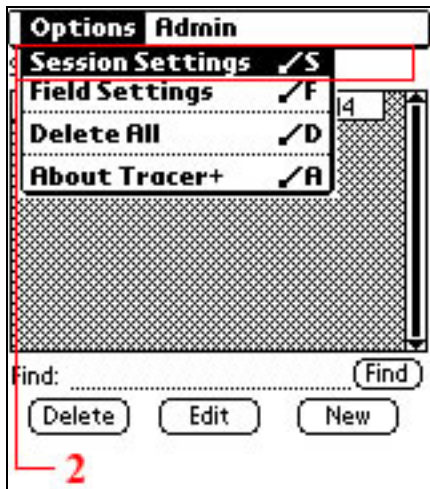
3.1 Configuring Sessions

The first step in creating a Tracer+ Session is to assign a name. This name is displayed in the session menu, and is selected by the user when collecting data, editing field settings, or editing session settings. To create a Session name, follow the steps below.

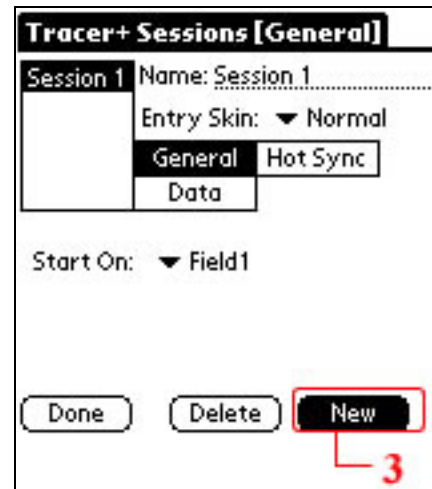
1. From the data view screen select the **Palm Menu** button.



2. Select **Session Settings**.

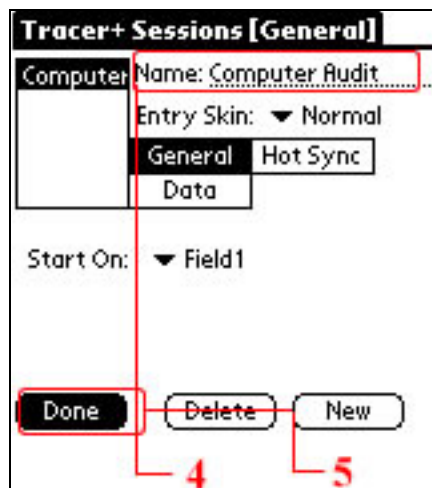


3. Select the **New** button.



4. Enter the name of the session you are creating.

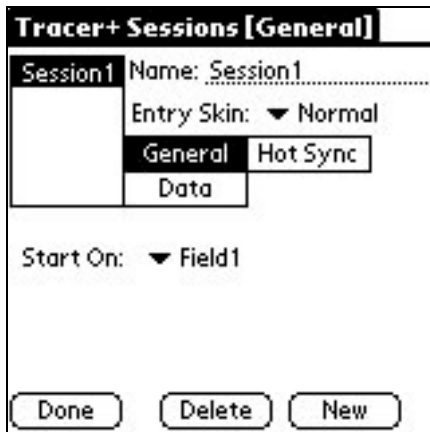
5. Configure your session's **General**, **Hot Sync** and **Data** attributes as described in **Sections 3.2-3.6**. When you are finished, press **Done**.



3.2 Session Settings Explained

3.2.1 General Session Settings

General Session Settings are used to control the general operating characteristics of the session. These operating characteristics can not be set at the field level.



The image shows the 'Tracer+ Sessions [General]' dialog box. It has a title bar with the text 'Tracer+ Sessions [General]'. Inside, there is a 'Session1' tab. Below the tab, there is a 'Name' field with the text 'Session1'. To the right of the 'Name' field is a 'Start On' dropdown menu with 'Field1' selected. Below the 'Name' field is an 'Entry Skin' dropdown menu with 'Normal' selected. Below the 'Entry Skin' field are three tabs: 'General', 'Hot Sync', and 'Data'. The 'General' tab is currently selected. At the bottom of the dialog box are three buttons: 'Done', 'Delete', and 'New'.

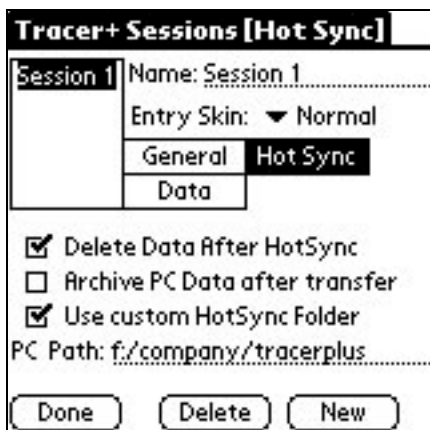
Start On

The **Start On** field is the first field the User is focused on when **New** is selected from the data view screen. This setting is commonly selected to control what data must be entered when the program is initially opened.

Example: A session is created to deliver a package. A Date and Time stamp is required. These 2 fields were chosen to be in Field1 and Field 2 and marked as read only. The first field the user will enter data into is Field 3; the Package ID field. In this case, the StartOn Field should be set to Field 3 since Field 1 and 2 are set to default values and marked as read only.

3.2.2 HotSync Settings

Hot Sync settings are used to control how data is routed during hot sync to the PC.



The image shows the 'Tracer+ Sessions [Hot Sync]' dialog box. It has a title bar with the text 'Tracer+ Sessions [Hot Sync]'. Inside, there is a 'Session1' tab. Below the tab, there is a 'Name' field with the text 'Session 1'. To the right of the 'Name' field is a 'Start On' dropdown menu with 'Field1' selected. Below the 'Name' field is an 'Entry Skin' dropdown menu with 'Normal' selected. Below the 'Entry Skin' field are three tabs: 'General', 'Hot Sync', and 'Data'. The 'Hot Sync' tab is currently selected. Below the tabs are three checkboxes: 'Delete Data After HotSync' (checked), 'Archive PC Data after transfer' (unchecked), and 'Use custom HotSync Folder' (checked). Below the checkboxes is a 'PC Path' field with the text 'f:/company/tracerplus'. At the bottom of the dialog box are three buttons: 'Done', 'Delete', and 'New'.

Delete Data After HotSync

Select **Delete Data After HotSync** if the data should be removed from the PDA after a successful HotSync.

Archive PC Data

Select **Archive PC Data after transfer** if you wish to archive any PC files transferred **TO** the PDA during HotSync.. Any data files sent **from** the PC, are renamed with a **.old** extension after a successful HotSync if this option is selected. In a multi user environment, many users would not select this option because it would prevent any user after the first from receiving updated PC files. PC Files include both List contents as well as any Session data needing upload to the PDA.

Use Custom HotSync Folder

If you wish to **HotSync** Data to a specific folder on your machine, specify it here. This is especially useful if you are running automated processing scripts and you have multiple users performing individual HotSync operations. This option allows you to have all users HotSync their data to a common location. If this option is selected, the transferred filenames are changed to include the username that sent the data. An example of a filename using this option is **S01_data_johnsmith.txt**.

Note: The folder specified here **MUST** exist on the PC. It will not be created automatically. If this folder is invalid, the transferred data will be transferred to the default HotSync folder.

An example of a valid value for this setting is **c:\Sample Folder**. Please note that there is no trailing backslash in this path

3.2.3 Data Storage / Transfer Settings

Data settings are used to control the format of the session's data file sent to the PC during a Hot Sync.



Export As

This feature allows the user to choose a file type for the export data file sent to the PC. Selections include; Text (Tab Delimited), Text (Comma Delimited), Text (Fixed Width), XML, and HTML.

Append to Existing File

TracerPlus, by default, overwrites the existing data file on the PC with the newly hot synced data file. When **Append to Existing File** is selected the new data file is appended to the pre-existing file.

Send Non-Visible Fields

TracerPlus, by default, does not include non-visible fields (**Section 4.2.2**) in the data file hot synced to the PC. When **Send Non-Visible Fields** is selected non-visible fields will be sent to the PC. Refer to Chapter 4 on how and when to use this field option.

Include Field Names

TracerPlus, by default, does not include field names in the hot synced data file.

When **Include Field Names** is selected field names are included in the hot synced data file. If a **Text File Type** (Tab, Comma, or Fixed Width) is selected, the field names are included as the first line of the created file. If an **HTML** or **XML** file type is chosen, the field names are included in the general format of the file.

3.3 Deploying Configured Sessions to Multiple Users

Tracer+ configured sessions can easily be deployed to your mobile workforce. To perform an enterprise wide deployment, simply follow these steps.

1. Create desired configuration on one PDA.
2. Test this configuration until satisfied with the result
3. Perform HotSync with this PDA.
4. Locate the created file TRPL-TracerPlus_Sessions.pdb.
5. Double Click this file and select the user(s) to deploy it to.
6. Perform HotSync of those user(s).

The Session settings should then be transferred to the new PDA.

Chapter 4: Field Settings

After a Session is created, fields within that session need configuration depending on your needs. Fields exist within each session with default settings. For many users, this may be sufficient and Field configuration is not necessary. For many other users, some modification of these default values is required. Proper field configurations speed up data acquisition and prevent data input errors. In this chapter, you will learn how to set up fields for your specific application. **Section 4.2** explains the various Tracer+ field settings in more detail.

4.1 Configuring Session Fields

Below we go through the steps required to configure field settings.

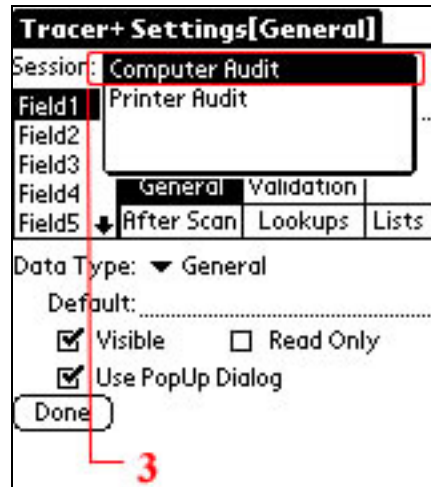
1. From the Tracer+ Main Screen, select the **Palm Menu** button.



2. Select **Field Settings**.



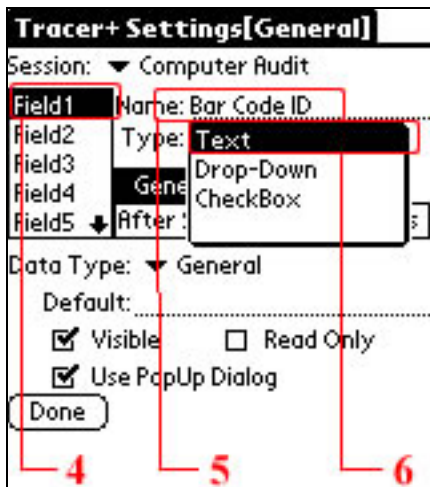
3. Select a Tracer+ session.



4. Select a field to configure.

5. Enter the field **Name**.

6. Select a field **Type**; **Text**, **Drop-Down**, **Checkbox** (Refer to **Section 4.2.1**)



7. Enter **General** field settings; **Default**, **Visible**, **Numeric Only**, and **Read Only** (Refer to **Section 4.2.2**)

Tracer+ Settings[General]

Session: ▼ Computer Audit

Field1	Name: Bar Code ID
Field2	Type: ▼ Text
Field3	
Field4	General Validation
Field5	After Scan Lookups Lists

Data Type: ▼ General

Default:

☒ Visible ☐ Read Only

☒ Use PopUp Dialog

Done

7

8. Enter additional field settings; **Validation**, **After Scan**, **Lookups**, and **Lists**. (Refer to **Sections 4.2.2 - 4.2.5**)

9. Repeat steps 4-8 to configure additional fields.

Tracer+ Settings[General]

Session: ▼ Computer Audit

Field1	Name: Bar Code ID
Field2	Type: ▼ Text
Field3	
Field4	General Validation
Field5	After Scan Lookups Lists

Data Type: ▼ General

Default:

☒ Visible ☐ Read Only

☒ Use PopUp Dialog

Done

8

4.2 Field Settings Explained

4.2.1 Field Types

Text

Text fields should be chosen when data is to be entered via a bar code, keyboard, or graffiti.

Drop-Down

Drop-Down fields allow the user to select from a pre-defined list of items. Drop-Down fields should be used whenever possible to speed data entry, and to limit data entry error. **Section 4.2.5** provides more detailed information regarding Drop Down lists.

Check Box

Check Box fields are used when simple Yes/No, True/False, On/Off selections are made. Check boxes should be used whenever possible to speed data entry, and limit data entry error.

4.2.2 Data Types

The **Data Type** represents the format of the expected data for the selected field

General

General is set to accept all data types in a field, including date time stamps.

Numeric

Numeric is set when the field is only used for numeric data. When a field's Data Type is set to Numeric, it does not accept any Alpha characters.

Date

Date is set when the field is used to enter dates.

Time

Time is set when the field is used to enter times.

Note: Time data is always stored in military format.

4.2.3 General Field Settings

General Field Settings allow the user to define the most basic field attributes. These settings allow a Tracer+ user to remove visibility of a field, establish default values, numeric only fields, and read only fields.

Text Settings

Tracer+ Settings[General]
Session: Computer Audit
Field1 Name: Bar Code ID
Field2 Type: Text
Field3 Type: Drop-Down
Field4 Type: General
Field5 After: After Scan
Data Type: General
Default: Systemax
☒ Visible ☐ Read Only
☒ Use PopUp Dialog
Done

Drop-Down Settings

Tracer+ Settings[General]
Session: Computer Audit
Field1 Name: Manufacturer
Field2 Type: Drop-Down
Field3 Type: General
Field4 Type: Validation
Field5 After: After Scan
Data Type: General
Default: Systemax
☒ Visible ☐ Read Only
☒ Use PopUp Dialog
Done

Checkbox Settings

Tracer+ Settings[General]
Session: Computer Audit
Field1 Name: Bar Code ID
Field2 Type: Text
Field3 Type: Drop-Down
Field4 Type: General
Field5 After: After Scan
Data Type: General
Default: Systemax
☒ Visible ☐ Read Only
☒ Use PopUp Dialog
Done

Default Values

The **Default** represents the value that is initially used for the selected field. For example, you may set up one of your fields to represent a quantity. Likewise, you might want to set the **Default** for that field to be 1.

Real Time Default

Tracer+ allows the user to utilize standard real time variables as a Default Value for any given field. There are four variables permitted at this time.

1. **[*DATE*]** - Enter the current date at the time of record entry
2. **[*TIME*]** - Enter the current time at the time of record entry.
3. **[*USER*]** - Enter the PDA User name at the time of record entry.
4. **[*DATETIME*]** - Enter the Date and Time in one field at the time of record entry.

Special note: These values must be entered exactly as specified. It may be easier to use the virtual keyboard as opposed to graffiti.

Note 1: The **Default** value is only used when the **Clear on Submit** option in the **After Scan** menu is selected for this field. If the user changes this value during data entry and **Clear on Submit** is not checked, the changed value is retained on the next record

Note 2: If the user clicks the **Clear All** button from the data entry screen, this value will be cleared as well.

Visible

This option is normally selected and allows a field to be viewed or not viewed in the data entry screen. A field's visibility should be turned off when it is not being used in a session or if the default contents need to be stored but not seen by the user as in the case of Date/Time stamping of an individual record.

Read Only

When **Read Only** is selected the user does not have the ability to enter data in the selected field. This is commonly used in conjunction with default values.

Use PopUp Dialog

This option is only valid when a field's **Data Type** is set to **Date**, **Time** or **Numeric** and the Read Only setting is set to FALSE. When a Field with this option selected, is tapped, a popup screen designed to speed data entry appears. Below are the three different Popup screens for the three data types.

Date Popup Dialog

The screenshot shows a 'Next Service Date' popup dialog. It features a calendar for the year 2002. The months are arranged in two rows: Jan, Feb, Mar, Apr, May, Jun and Jul, Aug, Sep, Oct, Nov, Dec. Below the months is a grid of days. The day 29 is highlighted with a red border. At the bottom, there are 'Cancel' and 'Today' buttons.

Time Popup Dialog

The screenshot shows an 'Arrival Time' popup dialog. It has two sections: 'Start Time' and 'End Time'. The 'Start Time' is set to 9:17 pm. The 'End Time' is also set to 9:17 pm. There is a 'No Time' button. At the bottom, there are 'OK' and 'Cancel' buttons. To the right of the time fields is a vertical list of numbers from 1 to 11, with 12P at the top.

Numeric Popup Dialog

The screenshot shows a 'Computer Audit' numeric popup dialog. It has a title bar 'Computer Audit' and 'Recs: 1'. Below is a 'Bar Code ID' field. The main area is titled 'Enter Number' and contains a numeric keypad with digits 0-9, a decimal point, and a minus sign. There are also buttons for 'Done', 'BS' (Backspace), 'C' (Clear), and 'Cancel'.

Numeric Popup Dialog Button Definitions

- : Subtracts 10 from the Qty.
- : Subtracts 1 from the Qty.
- ++ : Adds 10 to the Qty.
- + : Adds 1 to the Qty.
- Done:** Enters the Qty. and returns the user to the data entry screen.
- BS:** Backspace
- C :** Clears the current entry
- Cancel:** Clears the current entry and returns the user to the data entry screen.

4.2.4 Validation Field Settings

Validation Field Settings allow the user to exhibit controls that check the accuracy of the entered data.

The screenshot shows the 'Tracer+ Settings [Validation]' dialog. It has a 'Session' dropdown set to 'Computer Audit'. Below are fields for 'Field1' (Name: Bar Code ID), 'Field2' (Type: Text), 'Field3', 'Field4', and 'Field5'. There are tabs for 'General', 'Validation', 'Lookups', and 'Lists'. The 'Validation' tab is selected, showing options for 'Validate Immediately', 'Unique within record', and 'Unique within table'. There are also 'Min Len' and 'Max Len' fields. A 'Done' button is at the bottom.

Validate Immediately

This option represents whether or not a field should be validated immediately after it is entered. When **Validate Immediately** is *not* selected and **Validation** settings do exist, the field data will still be validated when the record is submitted.

Unique Within Record

When selected, this option prevents duplicate values within the current record.

Unique Within Table

When selected, this option prevents the user from entering duplicate data within the entire session for this field.

Min Len

This option allows the user to validate an entry based on the minimum number of characters it contains. If a field is submitted with less than the “**Min Len**” setting, a warning alarm will beep and a message will appear on the screen reading;” **Invalid Data in Field**”.

Max Len

This option allows the user to validate an entry based on the maximum number of characters it contains. If a field is submitted with more than the “**Max Len**” setting a warning alarm will beep and a message will appear on the screen reading;” **Invalid Data in Field**”.

4.2.5 After Scan Field Settings

After Scan field settings are designed to increase data entry speed and accuracy. Repetitive data capture situations such as inventory audits lend themselves to the efficiencies of these settings. It is strongly recommended that these features be activated when ever possible.

Tracer+ Settings [After Scan]

Session: ▼ Computer Audit

Field1	Name: Manufacturer
Field2	Type: ▼ Drop-Down
Field3	
Field4	General Validation
Field5	▼ After Scan Lookups Lists

☐ Validate Immediately

☐ Auto Submit ☒ Clear on Submit

Go To: ▼ Field3

Done

Validate Immediately

This option represents whether or not a field should be validated immediately after it is entered. When **Validate Immediately** is *not* selected and **Validation** settings do exist, the field data is still be validated when the record is submitted.

Auto Submit

This option represents whether or not to automatically submit this record after an '**After Scan**' event. If this option is chosen for the selected field, the system automatically submits the record and sets the focus to the field selected in the **Go To** prompt for the selected field.

NOTE: An '**After Scan**' event includes both a completed barcode scan as well as pressing the **Down Arrow** key on your PDA.

Go To

This option allows the user to control the **tab order** for the selected field. After a user performs a successful scan while in the focus of the selected field, the system sets the focus to whichever field is selected as the **Go To** Field.. The user typically uses this feature to control the '**flow**' of the data entry. Alternatively, the Down Arrow key represents an '**After Scan**' event for those PDAs that are not bar code enabled.

Clear On Submit

This option is used to tell the system whether to clear the selected field after submitting the current record in the Entry screen. If the current record is submitted as a result of an '**After Scan**' event or by clicking the **Submit** button, all the fields with this option selected are cleared. If the field has a Default Value, that value is used instead of a blank entry.

Note: If the user has selected a **Default** value for the field, the **Default** value is placed in the particular field when **Clear on Submit** is selected.

4.2.6 List Field Settings (Drop-Down Menus)

Lists allow Tracer+ users to create their own Drop-Down menus via list generation. Tracer+ gives the user the power to create these lists both on the PDA and on a PC. Once created the lists become **Drop-Down** menus, which aid in the accuracy and speed of Tracer+ data entry.

Tracer+ Settings [Lists]

Session: ▼ Computer Audit

Field1 Name: Manufacturer.....

Field2 Type: ▼ Drop-Down

Field3

Field4

Field5 ↓ After Scan Lookups Lists

☒ Allow PC Update Modify...

Done

Allow PC Update

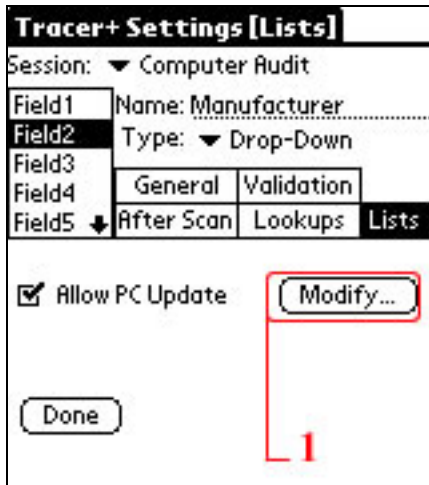
This option allows the user to create Drop-Down Lists on the PC. During **HotSync** these lists will be added to the Session and overwrite the drop-down lists saved on the PDA.

If you wish to allow list contents to be uploaded from the PC for a particular session and list, this option should be checked. If you wish to prohibit the PDA from getting updated list contents from the PC, simply uncheck this option. **Chapter 5** refers to PC Operations in more detail. Please refer to that section for more detail on updating the lists from the PC.

Modify (Create a List/ Drop Down Menu)

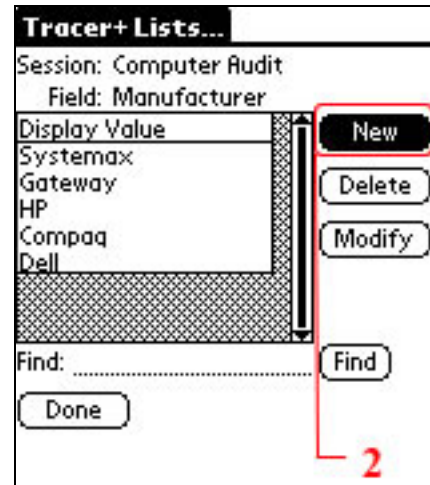
By selecting the **Modify** button the user is brought to the **Lists** screen where a drop-down list for the selected field can be created. Below we will go through the steps in creating a drop-down menu by creating a list on the PDA.

1. Select **Modify**.



The screenshot shows the 'Tracer+ Settings [Lists]' screen. At the top, it says 'Session: Computer Audit'. Below that, 'Field1' is set to 'Name: Manufacturer'. 'Field2' is set to 'Type: Drop-Down'. There are tabs for 'General', 'Validation', 'Lookups', and 'Lists', with 'Lists' being the active tab. At the bottom left, there is a checkbox for 'Allow PC Update' which is checked. To its right is a 'Modify...' button, which is highlighted with a red box and a red line pointing to the number '1' below it. A 'Done' button is at the bottom left.

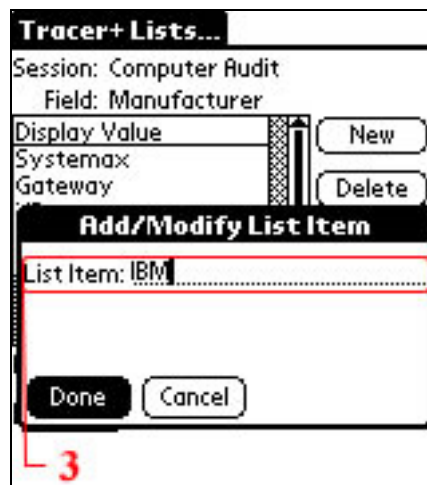
2. Select **New**.



The screenshot shows the 'Tracer+ Lists...' screen. It displays 'Session: Computer Audit' and 'Field: Manufacturer'. A list of 'Display Value' items is shown: Systemax, Gateway, HP, Compaq, and Dell. To the right of this list are three buttons: 'New' (highlighted with a red box and a red line pointing to the number '2' below it), 'Delete', and 'Modify'. At the bottom, there is a 'Find:' field with a 'Find' button and a 'Done' button.

3. Enter a **List Item**.

4. Repeat steps 2-3 to add additional items.



The screenshot shows the 'Add/Modify List Item' dialog box. It has a title bar 'Add/Modify List Item'. Inside, there is a text field labeled 'List Item:' with the value 'IBM' entered. Below the text field are two buttons: 'Done' and 'Cancel'. A red line points from the number '3' below to the 'List Item:' text field.

Tracer+ **List Items** can be edited and deleted in the Tracer+ **Lists** screen. Simply choose the value to be edited and select the appropriate button.

4.2.7 Automatic Field Lookups

Automatic Field Lookups allow the user to quickly access a pre-existing record and update a numeric field within that record by a pre-determined increment value. When the user scans/keys in a **Key Field** the database is searched to match the entered data. If a match is found the associated record is brought up in the **Data Entry Screen** and the **Update Field** (numeric only) will be altered by the preset **Increment By** value. If no match is found a new record will be created.

Note: Only one Lookup can exist for a session; however this lookup will be visible and editable in every field setting within that session.

Tracer+ Settings [Lookups]

Session: ▼ Computer Audit

Field1	Name: Bar Code ID
Field2	Type: ▼ Text
Field3	
Field4	General Validation
Field5	After Scan Lookups Lists

☐ Use Lookups

Key Field: ▼ Field1

Update Field: ▼ Field1

Increment By: 1

Done ☐ Update Variables

Enable Lookups

Check this box to enable Lookups in your current session.

Key Field

The data entered into this field is used as the search criteria for lookup upon either a scan or a manual entry. After either of these events the database is searched for a match to this entry. If a match is found the associated record is brought up in the data entry screen and a pre-determined update occurs. If no match is found a new record is created.

Update Field

This is a numeric field that will be updated when a successful **Key Field** lookup occurs. It is intended to only increment an existing numeric value for the given record.

Increment By

This numeric value allows you to select the amount by which the **Update Field** will be incremented. This is especially useful when inventory adjustments are being made and items are located in multiple locations.

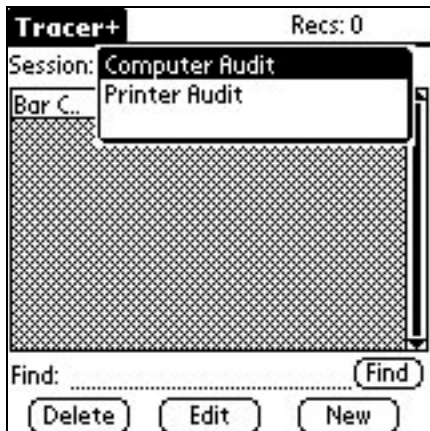
Update Variables

When **Update Variables** is selected **Time** and **Date** default values will be updated when the record is submitted. By default Date/Time variables will store what date/time the record was begun but not when it was submitted.

Chapter 5 Managing Data

5.1 Entering Data

To enter data in Tracer+ the user first selects the desired session and then selects the **New** button. When the **New** button is selected the user is brought to the **Entry Screen** where data entry can begin.



Entry Screen

The **Entry Screen** is the area where the user does his data entry. The fields are presented to the user with the customized fields as they were configured. The user enters data for each field presented. When the data is being scanned, the system controls the flow to the next field based on the Field Settings previously set up. This screen contains three buttons. These are discussed below.



Done Button

Click the **Done** button when you have finished entering data and would like to return to the **Main Screen**. You will be prompted as to whether you would like to save the last record. Answer appropriately. You will now be returned to the **Main Screen**.

Submit Button

Clicking the **Submit** button submits the current record to the database. After clicking this button, the focus is set to the field that was set as the Session Start On Field. Refer to Section 3.2.1 for more information on setting a **Start On Field**.

Clear All Button

Clicking the **Clear All** button clears all the data from all of the fields for this record. Notice that the focus does not change after clicking this button. Also notice that any **Default** values selected in the Field Settings are not recognized.

5.2 Quick Buttons

Tracer+ incorporates as many features as possible in order to minimize screen tapping. This allows very fast and accurate data entry. One of the features to aid in this is using the **Up/Down** keys on your PDA.

The **Up Arrow** key allows the user to move up one field on the **Entry Screen**. Please note that this does not respect tab order. It simply moves up one field on the **Entry screen**.

The **Down Arrow** key allows the user to move down one field in the **Entry Screen**. One significant difference in the **Down Arrow** key is that if the field with current focus is set to Auto Submit, the record will be submitted. This allows the user to quickly submit records even though the '**Auto Submit**' field may not be a barcode field. An example of this might be if the last field of entry is a quantity.

5.3 Managing Data from the PDA to the PC

Tracer+ comes with a conduit allowing easy transfer of collected data via the standard synchronization process, **HotSync**. This chapter outlines all of the features available for PC processing.

5.3.1 How Data is sent to the PC

Tracer+ transfers all session data to the PC via the standard HotSync™ process. By default, this data is contained in a folder called **TracerPlus**. This folder typically resides under the assigned username's designated folder but this may vary depending on the specific desktop synchronization application you are using.

For example, if your PDA username is John Smith, you would find Tracer+ data in a folder called **C:\Palm\SmithJ\TracerPlus** by default.

Note: Each session defined on the PDA generates its own data file. Each session file created is named **Sxx_data.txt** where:

xx= the index of the session you want to upload

For example, if you have 2 sessions defined on your PDA named Receiving and Shipping respectively, any data collected for the receiving session will be named **S01_data.txt** and the shipping session data would be named **S02_data.txt**

5.3.2 Importing and Linking Tracer+ Data to Databases

In the Session's **Data** settings select the **Export As** data type that is compatible with your database. Next determine where the data should reside on the PC and then set this path by creating a Custom HotSync file (Section 3.2.2) in Tracer+ or use the default location. Once this is complete import steps must be followed for the particular database being utilized.

5.3.3 Importing Tracer+ Session Data to an MS Access Table

Access is an affordable and popular database that can be utilized to manage Tracer+ data. To import Tracer+ session 1 data, file name **S01_data.txt**, follow these steps:

1. In Access open your database or create a new database.
2. Select File.
3. Select Get External Data.
4. Select Import.
5. In the Import dialog box, select Files of type: Text files (*.txt).
6. In the file name list box enter you the path to S01_data.txt.
7. Select Import.
8. Follow the Import Wizard steps to complete the import.

5.3.4 Linking Tracer+ Data to an MS Access Table

Access allows .txt files to link directly to Access tables. This is a valuable tool because it eliminates the manual process of importing data. To link your S01_data.txt file to an Access table follow these steps:

1. In Access, open your database or create a new database.
2. Select File.
3. Select Get External Data.
4. Select Link
5. In the Link Tables dialog box, select Files of type: Text files (*.txt).
6. In the file name list box enter you the path to S01_data.txt.
7. Select Link
8. Follow the Import Tables Wizard to complete the linking.

5.4 Sending a Database to the PDA

Tracer+ allows you to send databases from the PC directly to your Tracer+ sessions on the PDA. Our customers find this an invaluable tool and utilize it many different ways. For example if an inventory control manager needs to distribute pick lists he simply saves the file to the warehouse **IPCDData** folder for later import. If a maintenance manager needs to distribute jobs he distributes the job files to the maintenance personnel's **IPCDData** folder. The scenarios in which this feature can be used are limitless!

Many of our customers connect their Tracer+ sessions with 3rd party databases to give their current systems added functionality. By exporting their databases from Microsoft Access and/or Excel these data files can easily be created and distributed.

5.4.1 Sending Session Data to PDA

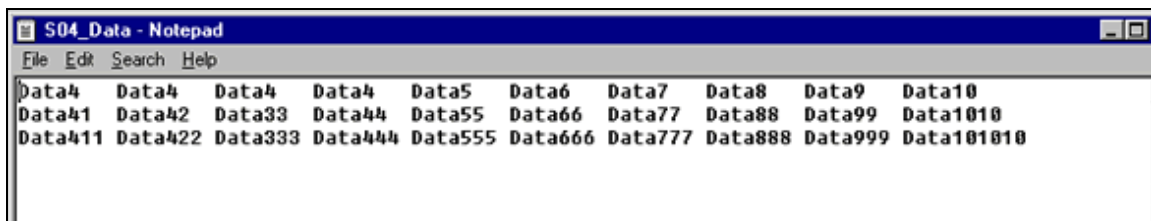
All data prepared for upload to the PDA must be stored in a folder called **PCData**. This folder must be located under the **TracerPlus** folder within the Palm Desktop hierarchy and it is automatically created upon installation. An example of what the data location of this folder might look like is **c:\Palm\SmithJ\TracerPlus\PCData**

Tracer+ allows tab delimited files to be sent from the PC to the PDA. The data file must be named exactly the same as the data generated by the HotSync process. So, for example, if you want to upload data for Session 2 on the PDA, the filename must be **S02_data.txt** and must be located in the **PCData** subfolder in the Palm Desktop Hierarchy.

The required file definition for sending session data from the PC to the PDA is as follows.

```
Field1<tab>Field2<tab>Field3<tab>....Field9<tab>Field10<cr>  
Field1<tab>Field2<tab>Field3<tab>....Field9<tab>Field10<cr>
```

Below is a sample data file prepared for upload to a Tracer+ session.



A sample upload session file is located with this install. If you wish to test the functionality of this feature, simply place that sample file in the **PCData** subfolder and set its name to the appropriate session.

Note: If you define data for a session index that does not exist on the PDA, it will be ignored.

5.4.2 Creating Session Data Files with Excel

To create a session data file with excel follow these steps.

1. Open the desired database in Excel
2. Select File from the Menu bar
3. Select Save As
4. In the Save As dialog box, select **Save As Type:** Text (Tab Delimited)
5. Save your session to c:\Palm\YOURUSERNAME\TracerPlus\PCData
6. Close the Excel file
7. Perform a HotSync to upload the data file to the PDA

5.4.3 Sending list data to PDA (Drop-Down Menus)

Tracer+ also allows the user to prepare and manage list definitions (Drop-Down Menus) on the PC for later upload to the PDA running Tracer+. The filename of list data to be uploaded must be named **Sxx_Lyy.txt** where

xx = the session index

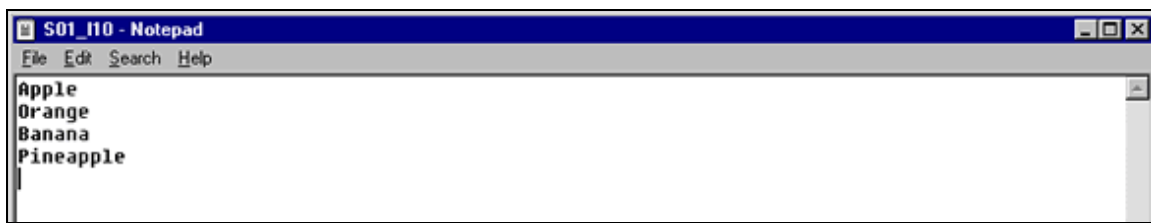
yy = the list index

For example, if you want to send the list contents for session 2 in the 4 field, the filename must be named **S02_L04.txt**.

Note: Simply sending the list contents for a particular session and a particular field does not automatically define that field as a drop down list. This must still be set in the **Field Settings** portion of the PDA application. Please refer to **Chapter 4** for instructions on setting field properties.

The format for the list files is very simple. Each list element must be stored on it's own line. Since there is only one field, there is no need for a **<tab>** delimiter between fields.

A sample of what this data must look like is as follows.



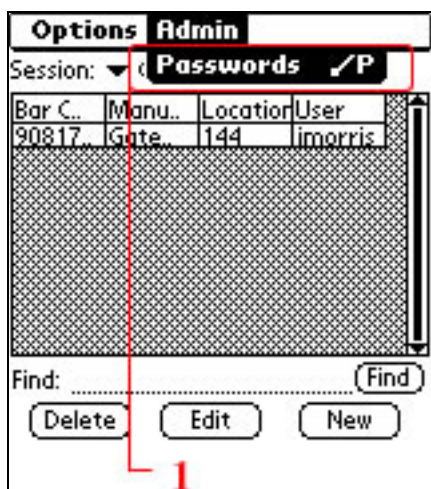
A sample upload list file is located with this install. If you wish to test the functionality of this feature, simply place that sample file in the **PCData** subfolder and rename it to the session name and list index that is appropriate for you.

Chapter 6: Administration Settings

Once sessions are configured it is customary to implement password protection so field personnel cannot easily alter the session settings. When a **Password** is set a user is required to enter this **Password** to access any areas protected by the Tracer+ Admin Settings. Administrators commonly **Enable Protection** for **Session Settings** and **Field Settings**. Below you will learn how to set Passwords and set protection levels for program settings as well as data.

6.1 Setting Passwords

1. Select **Passwords** in the Grid Screen



2. Select **Use Password**

3. Enter your **Password**

4. Enter additional protection levels; **Session Settings**, **Field Settings**, **Delete One Record**, **Delete All Records** and **Edit Records** (Refer to Sections 6.1.2)



6.1.2 Enable Protection for

Session Settings

When protection is enabled for **Session Settings**, the user is required to enter a password to edit or add sessions.

Field Settings

When protection is enabled for **Field Settings**, the user is required to enter a password to edit or add field.

Delete One Record

When protection is enabled for **Delete One Record**, the user is required to enter a password to delete a record from the data view screen.

Delete All Records

When protection is enabled for **Delete All Records**, the user is required to enter a password to delete all records from the menu bar.

Edit Records

When protection is enabled for **Edit Records**, the user is required to enter a password to edit a record after it is submitted.

Chapter 7: Session Setup Tutorial

Inventory Audit Tutorial

With Tracer+ installed on your PDA, follow these steps to create an Inventory Audit program. Please be advised unless you have a bar code enabled PDA, bar coding will not work with Tracer+.

1. Tap the **Tracer+** Icon from the PDA's main menu.
2. Tap **Try It!** In the Tracer+ splash screen, (If you are registered, simply tap the screen).
3. Tap the Palm Menu Button (Lower left hand corner of Palm Screen).
4. Tap the **Session Settings** menu.
5. Tap **New** and enter your Session Name "Inventory Audit" in the **Modify Session** window, select **Field3** as your **Start On** field, tap done.
Note: Since this is a simple tutorial we are not going to make advanced settings in the Session Settings Area, at a later time after reading the manual you can further define your Session attributes.
6. Tap **Done** in the Tracer+ **Sessions** screen.
7. At this point, you should see your **Inventory Audit** session in the **Session** drop down menu above the data grid.
8. Tap the Palm Menu Button
9. Tap the **Field Settings** menu
10. **Field1** should be highlighted. Enter "Product ID" in the **Name** field. If your Part Ids are always a certain length, tap **Validation** and enter a **Min** and **Max** length. Note: All Tracer+ fields are bar code enabled however we do recommend setting field 1 for inventory operations as your unique product id.
11. Tap **Field2** and enter "Part Description" in the **Name** field. → Tap the **After Scan** button and set the **Go To** field to Field 4, this setting will allow you to bypass Field 3 in your normal flow of work. **Note:** To ease data entry we recommend that bar code labels have both a bar coded Product ID and a Bar Coded description.
12. Tap **Field3** and enter "Location" in the **Name** field. → Tap the After Scan button and uncheck **Clear on Submit** and check after scan to Field1. Changing this setting eliminates the need to re-enter every time a record is entered. **Note:** This field has been set anticipating bar code entry of a location.
13. Tap **Field4** and enter "Quantity" in the **Name** field, change the **Data Type** to Numeric and check **Use Popup Dialog**.
14. Tap **Field5** and enter "Date" in the **Name** field, in the Default field enter [*DATE*]. Note it may be easier to use the virtual keyboard to enter this default.
15. Tap **Fields6-10** and uncheck **Visible**. → Tap Done.
16. In the Data View Screen you should now see fields 1-4 in the headers.
17. Tap **New** and start entering Data
18. After Fields 1-5 are entered hit submit.
19. At anytime if a location changes simply tap field 3 and scan in the new location.
20. After all of the Inventory is collected tap **Done**.
21. Place your PDA in its cradle and hotSync your data. Chapter 5 instructs you how to manage this data once it is hot synced.

This session setup utilizes basic Tracer+ features that aid in data collection. This session can be easily altered to meet your exact needs or to match the field configurations of your particular database. PTS strongly recommends reading this manual thoroughly.